AMENDMENTS TO THE CLAIMS

Please amend Claims 59, 65, 73 and 80, and cancel Claims 46-58 and 87-99 as follows:

1-58. **(Canceled)**.

59. **(Currently amended)** A method of controlling a prosthetic knee system, comprising:

measuring at least one characteristic of knee movement;

calculating a damping value based at least partly on the at least one measured characteristic; and

applying the damping value to control a resistance of a magnetorheological damper operating primarily in shear mode, wherein said damping is created primarily by shear forces.

60. **(Previously presented)** The method of Claim 59, wherein the magnetorheological damper operating primarily in shear mode comprises a rotary magnetorheological damper operating primarily in shear mode.

61. **(Previously presented)** The method of Claim 59, wherein the measuring comprises receiving a value from a knee angle sensor.

62. **(Previously presented)** The method of Claim 59, wherein the measuring comprises receiving a value from a load sensor.

63. **(Previously presented)** The method of Claim 62, wherein receiving a value from the load sensor comprises receiving at least one value from a strain gauge.

64. **(Previously presented)** The method of Claim 59, wherein the calculating comprises adapting a damping parameter.

65. **(Currently amended)** A prosthetic knee system, comprising:

a magnetorheological damper ~~operating primarily in shear mode~~ configured to provide damping to a prosthetic knee, wherein said damping is created primarily by shear forces;

at least one sensor configured to measure knee motion; and

a software system configured to send a control signal to the damper based at least partly on the knee motion measured by the at least one sensor.

66. **(Previously presented)** The system of Claim 65, wherein the magnetorheological damper comprises a rotary magnetorheological damper.

67. **(Previously presented)** The system of Claim 65, wherein the at least one sensor comprises a knee angle sensor.

68. **(Previously presented)** The system of Claim 65, wherein the at least one sensor comprises a load sensor.

69. **(Previously presented)** The system of Claim 68, wherein the load sensor comprises at least one strain gauge.

70. **(Previously presented)** The system of Claim 65, wherein the control signal comprises a current and wherein the damper is configured to vary resistance to rotation in response to the current.

71. **(Previously presented)** The method of Claim 59, further comprising identifying a control state based at least partly on the at least one measured characteristic of knee movement, and calculating a damping value based at least partly on the control state.

72. **(Previously presented)** The system of Claim 65 wherein the software system is configured to identify a control state based at least partly on the measure of knee motion and configured to send a control signal to the damper based at least partly on the control state.

73. **(Withdrawn-currently amended)** A method of controlling a prosthetic joint system, comprising:

measuring at least one characteristic of joint movement;

identifying a control state from a plurality of distinct, predetermined control states based at least partly on the at least one measured characteristic of joint movement;

calculating a damping value based at least partly on the control state; and

applying the damping value to control a resistance of a magnetorheological damper, wherein said damping is created primarily by shear forces.

74. **(Withdrawn)** The method of Claim 73, wherein each of the predetermined control states corresponds to a phase of the gait.

75. **(Withdrawn)** The method of Claim 73, wherein the prosthetic joint system comprises a prosthetic knee.

76. **(Withdrawn)** The method of Claim 75, wherein the magnetorheological damper operates primarily in shear mode.

77. **(Withdrawn)** The method of Claim 73, wherein the measuring comprises receiving a value from an angle sensor.

78. **(Withdrawn)** The method of Claim 73, wherein the measuring comprises receiving a value from a load sensor.

79. **(Withdrawn)** The method of Claim 73, wherein the calculating comprises adapting a damping parameter.

80. **(Withdrawn-currently amended)** A prosthetic joint system, comprising:

a magnetorheological damper configured to provide damping to a prosthetic joint, wherein said damping is created primarily by shear forces;

at least one sensor configured to measure joint motion; and

a software system configured to identify a control state from a plurality of distinct, predetermined control states based at least partly on the measure of joint motion and configured to send a control signal to the damper based at least partly on the control state.

81. **(Withdrawn)** The system of Claim 80, wherein each of the predetermined control states corresponds to a phase of the gait.

82. **(Withdrawn)** The system of Claim 80, comprising a prosthetic knee.

83. **(Withdrawn)** The system of Claim 80, wherein the magnetorheological damper operates primarily in shear mode.

84. **(Withdrawn)** The system of Claim 80, wherein the at least one sensor comprises an angle sensor.

85. **(Withdrawn)** The system of Claim 80, wherein the at least one sensor comprises a load sensor.

86. **(Withdrawn)** The system of Claim 80, wherein the control signal comprises a current and wherein the damper is configured to vary resistance to rotation in response to the current.

87-99. **(Canceled)**.

SUMMARY OF INTERVIEW

The Interview was conducted by the undersigned Attorney of Record accompanied by his team members, at the United States Patent and Trademark Office on February 15, 2007 with Examiners David Willse and Javier G. Blanco present.

Exhibits and/or Demonstrations

A prosthetic knee (the Rheo Knee™) product, referred to as an "Implant" by the Examiner(s) in their Interview Summary, was exhibited in a non-operational mode.

Identification of Claims Discussed

Claims 59-72 were discussed.

Identification of Prior Art Discussed

U.S. Patent No. 6,423,098 B1 to Biedermann (hereafter "Biedermann") was discussed.

Proposed Amendments

It was proposed to file a Terminal Disclaimer; amend independent Claim 59 to recite "a resistance;" and amend independent Claims 59 and 65 to recite "wherein said damping is created primarily by shear forces."

Principal Arguments and Other Matters

The Terminal Disclaimer overcomes the obviousness-type double patenting rejections of Claims 65-69 based on Claims 13, 14, 18, 19, 20 and 27 of the prior parent patent.

The amendment to Claim 59 to recite "a resistance" overcomes the indefiniteness rejections of Claims 59-64 and 71.

Biedermann does not teach or suggest the proposed amended claims.

Results of Interview

Agreement was reached with respect to Claims 59-72. The Examiner(s) agreed that the proposed amendments would put Claims 59-72 in condition for allowance.